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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|

09/780,540 02/12/01 HIRAYAMA

Y 01028

EXAMINER

MMC2/0919
DENNISON, MESEROLE, SCHEINER & SCHULTZ
SUITE 612
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON VA 22202-3417

NGUYEN, T
ART UNIT

PAPER NUMBER

2872
DATE MAILED:

09/19/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Applicant No.

09/780,540

Applicant(s)

HIRAYAMA ET AL.

Examiner

Thong Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Oath/Declaration

2. The objection to the Oath/Declaration made in the previous Office action is now Withdrawn due to the newly-filed Oath/Declaration by the applicant on 07/09/2001.

Specification

3. The lengthy specification which is amended by the Amendment (Paper No. 6) of 07/09/2001 has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

4. The following correction is suggested to the specification at page 6.

In page 6: on line 4, the description thereof "Since the angle... 45° ($90^{\circ} - \theta_1$)" should be changed to --Since the angle... 45° ($90^{\circ} - \theta_2$)--. The reason of this suggestion is that the angle elevation of the rear side is the result of the subtraction between 90 degrees and the angle formed by the rear side of the groove (1e) and the line perpendicular to the light discharge surface (1b). See also the present specification at page 5, lines 22-25.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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6. Claims 1-6, as best as understood, are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Redmond et al (U.S. Patent No. 5,664,862, of record).

See Redmond et al, columns 2-3 and 5 and figures 1 and 7.

Response to Arguments

7. Applicant's arguments filed on 07/09/2001 (Paper No. 6, pages 4-5) have been fully considered but they are not persuasive for the following reasons.

In response to the rejection of pending claims 1-6 under 35 USC 102(b) over the art of Redmond et al, applicant has argued that the device of the art does not teach that the plural grooves continuously formed on the light reflecting surface, and the light from the light source is guided to the reflector (28) and consequently is not used to illuminate the display panel. The Examiner respectfully disagrees with the applicant's opinions and respectfully invited the applicant to review the art of Redmond et al and the rejection as set forth in the previous Office action. Redmond et al disclose an edge light illumination system for a panel display. The device as taught at columns 2-3 and 5 and shown in figures 1 and 7 comprises a light source system (14) for providing light, a light guide (13) having a front surface (19) facing the light source system, a light discharge surface (17) facing the display panel (12); a reflecting surface (18) disposed opposite the light discharge surface (17) facing a reflector (26) which is disposed opposite the display panel; a rear surface (20) located opposite the front surface (19) wherein the rear surface (20) faces a reflector (28). The light reflecting surface (18) comprises a plurality of grooves each has a front side (23) and a rear side (24).

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Since the angle formed by the front side (23) and the light reflecting surface (18) is in the range of (1° , 15°) and the angle formed by the rear side (24) and the light reflecting surface (18) is in the range of (35° , 55°); therefore, the angle formed by the front side (23) and a line perpendicular to the light discharge surface (17) is in the range of (75° , 89°) and the angle formed by the rear side (24) and a line perpendicular to the light discharge surface (17) is in the range of (35° , 55°). The light from the light source (14) passing through the front surface (19) of the light guide (13) will have a section of transmitted light being reflected by the front side (23) of each groove towards the display panel (12) and other section of transmitted light which is not reflected by the front side (23) of the groove being reflected by the reflector (28). The light reflected by the reflector (28) is now reflected by the rear side (24) of each groove towards the display panel (12). As such, the display panel is illuminated by both light reflected by the front side (23) and the rear side (24) of each groove formed on the reflecting surface (18). With regard to the feature that the grooves are continuously formed on the reflecting surface, such a feature is also disclosed by Redmond et al as can be seen in the embodiment described at column 5 and shown in figure 7 which disclosed that there is not any space between two adjacent grooves.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. A copy of the form PTO-1449 with the Examiner's initial signature is attached with this Office action.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q Nguyen whose telephone number is 703 308 4814. The examiner can normally be reached on M-F.

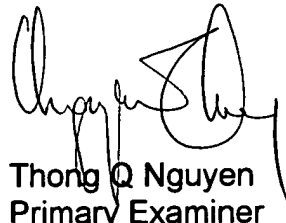
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703 308 1687. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308 7724 for regular communications and 703 308 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

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A handwritten signature in black ink, appearing to read 'Thong Q. Nguyen', is written over a printed name and title.

Thong Q. Nguyen
Primary Examiner
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September 10, 2001